United States Patent [19]

Rivest

[11] **4,376,299**

[45] **Mar. 8, 1983**

[54] **DATA CENTER FOR REMOTE POSTAGE METER RECHARGING SYSTEM HAVING PHYSICALLY SECURE ENCRYPTING APPARATUS AND EMPLOYING ENCRYPTED SEED NUMBER SIGNALS**

[75] Inventor: **Ronald L. Rivest**, Belmont, Mass.

[73] Assignee: **Pitney Bowes, Inc.**, Stamford, Conn.

[21] Appl. No.: **168,931**

[22] Filed: **Jul. 14, 1980**

[51] Int. Cl.^{3} H04L 9/00
[52] U.S. Cl. 364/900; 178/22.08
[58] Field of Search .... 364/900 MS File; 340/825.3; 375/2.1; 178/22.01, 22.08, 22.09, 22.18, 22.19

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,034,329	5/1962	Pitney et al.	70/314
3,664,231	5/1972	Hanson	70/292
3,800,284	3/1974	Zucker et al.	340/825.31
3,978,457	8/1976	Check, Jr. et al.	364/200
4,097,923	6/1978	Eckert, Jr. et al.	364/900
4,182,933	11/1980	Rosenblum	178/22.09 X
4,253,158	2/1981	McFiggins	178/22.01 X

FOREIGN PATENT DOCUMENTS

2636852 2/1978 Fed. Rep. of Germany .

Primary Examiner—Raulfe B. Zache
Attorney, Agent, or Firm—David E. Pitchenik; Mr. W. D. Soltow, Jr.; Albert W. Scribner

[57] **ABSTRACT**

A data center for remote postage meter recharging receives resetting signal information to reset a remotely located postage meter. The remotely located postage meter has signal information stored therein for use in recharging the meter with additional postage in conjunction with a signal information received from the data center and entered into the meter. The data center includes a sealed unit for processing received resetting signal information and encrypted signal information stored at the data center outside of the sealed unit. The stored encrypted signal information at the data center is equivalent to the signal information stored in the remotely located postage meter. The sealed unit includes a decrypter for decrypting the encrypted signal information so that it may be combined with the resetting signal information to generate a signal for use in resetting the remotely located postage meter. The sealed unit also includes an encrypter for encrypting information to provide updated encrypted signal information to be stored at the data center outside of the sealed unit for use when the remotely located postage meter is again to be reset with additional postage.

12 Claims, 4 Drawing Figures